

MCAQ Response to Comments
Charlotte Pipe & Foundry Company, Inc.
Title V Construction Permit
Draft Permit No. 20-01C-626

July 22, 2020

Introduction

Response to Comments

Response to Comments Related to Public Health

Response to Comments Related to Volatile Organic Compounds

Response to Comments Related to Environmental Justice

Response to Comments Related to MCAPCO Regulation 1.5109 – “Nuisance”

Response to Comments Related to Emissions Controls Requirements

Response to Comment Related to Public Comment Period

Response to Comments Related to Odor

Revocation or Modification of Permit for Changing Land Use and Affected Population

Response to Comment Related to Specific Chemicals Emitted by E-Coat #2

Introduction

On May 18, 2020, Mecklenburg County Air Quality (MCAQ) published the required 15-day public notice for proposed issuance of the Charlotte Pipe & Foundry (CP&F) Title V construction permit. The notice was placed in The Charlotte Observer and on the MCAQ website.

During the initial 15-day comment period, MCAQ received one comment letter with a request to extend the length of the public comment period. The Director of MCAQ agreed to extend the public comment period by an additional 15 days, which resulted in the public comment period remaining open through June 17, 2020.

During the extended public comment period, three (3) written comment documents were submitted via email. These comment documents represented Clean Air Carolina, twelve residents of the Trademark Condominiums, and one resident of the Wilmore neighborhood.

This document contains MCAQ's responses to each comment received during the public comment period.

Response to Comments

Response to Comments Related to Public Health

Three (3) of the comment documents expressed concern about public health and possible health effects of exposure from living in the vicinity of the foundry.

The applicable rules and regulations incorporated into this permit are set forth to minimize air pollution for the protection of public health. The EPA has developed science and technology-based regulations to protect public health and welfare. According to the Clean Air Act (CAA), a facility must comply with all applicable air regulations, or include a plan to achieve compliance, prior to a Title V permit being issued. Based on recent inspections, computer modeling of emissions, emissions testing, and review of required reports, CP&F is in compliance with all applicable regulations including the technology-based federal Hazardous Air Pollutant program and the health-based North Carolina Air Toxics program. To ensure continued compliance, this permit includes emission limitations, monitoring, recordkeeping, and reporting requirements. MCAQ routinely conducts unannounced inspections to determine compliance as well. In addition, MCAQ's air quality monitoring network shows that Mecklenburg County currently meets all the National Ambient Air Quality Standards for clean air.

The specific technology-based federal Hazardous Air Pollutant regulation to which foundry operations at CP&F are subject is 40 CFR 63 Subpart ZZZZZ – National Emission Standards for

Hazardous Air Pollutants for Iron and Steel Foundries. This regulation, in part, requires CP&F to follow specific pollution management practices for metallic scrap, mercury switches, and binder formulations; perform semiannual visual emission tests from buildings or structures housing any iron and steel foundry emissions sources; and submit semiannual compliance reports. CP&F has demonstrated compliance with the requirements of this regulation and will be required to continue to demonstrate ongoing compliance with the requirements of this regulation.

There is no demonstrated reason that compliance with all applicable air regulations is not sufficient to protect public health. Therefore, MCAQ has no regulatory framework to deny or revoke a Title V permit to a facility which has met all requirements for that permit to be issued.

Response to Comments Related to Volatile Organic Compounds

Two (2) of the comment documents expressed concerns about additional volatile organic compound (VOC) emissions.

MCAQ understands the concern related to additional VOC emissions. However, because the potential VOC emissions are below the significant modification threshold under the federal New Source Review program, there is no regulatory mechanism to “cap” VOC emissions.

CP&F provided the following information related to the VOC content of the coatings that will be used in the new process.

The coating materials used in the proposed E-coat #2 process are composed of 42% - 60% water. Compounds identified by USEPA and North Carolina Department of Environmental Quality (NCDEQ) as hazardous air pollutants (HAPs) or toxic air pollutants (TAPs) comprise less than 0.5% of the coating materials. The remaining VOC in the coatings have not been identified as HAP or TAP by USEPA or NCDEQ.

As conditions continue to change in the US sewer systems (low flow systems); engineers, architects, contractors, and building owners are specifying paints that will offer more corrosion protection over traditional asphaltic paints. As compared to many coatings, e-coat is a low VOC-emitting operation with a high paint transfer efficiency.

Response to Comments Related to Environmental Justice

Two (2) of the comment documents expressed environmental justice concerns for Charlotte’s historic west end community.

EPA defines Environmental Justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” Per the EPA website, the EPA believes this goal can be achieved when everyone enjoys:

- the same degree of protection from environmental and health hazards, and

- equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

CP&F's Title V Operating Permit includes all applicable federal, state, and local air regulations. These regulations are meant to minimize pollutants so that public health will not be adversely impacted. CP&F has demonstrated compliance with these federal, state, and local air regulations through site-specific computer modeling, emissions testing, and compliance monitoring reports.

MCAQ has also adopted an enhanced communication plan to notify the public and surrounding community in relation to the review of this permit. The public comment notice was published in The Charlotte Observer newspaper on May 18, 2020 and posted on the MCAQ website along with draft documents for review. MCAQ also used email listservs and the local Air Quality Commission to communicate with the public about the comment period.

MCAQ recently completed an environmental justice analysis for the area surrounding the foundry. The final study was made available on the MCAQ website on March 11, 2020. The following conclusions were made from the analysis:

- Based on the demographic data collected, some of the neighborhoods surrounding CPF have a high percentage of minority residents and a high percentage of residents who fall below the federal poverty line while others do not.
- Based on environmental indicators for the 1.5-mile radius of CP&F compared with Mecklenburg County, there is no evidence of disproportionate impact from ozone or PM 2.5 in those communities.
- There are comparatively higher National Air Toxics Assessment (NATA) indicators and traffic proximity and volume, both of which originate from mobile sources, such as cars and other on-road and non-road equipment.

In accordance with the steps identified in the environmental justice analysis completed by MCAQ, the following enhanced communication efforts were undertaken for this permit application review:

- provided notice for the public comment period
- created a fact sheet with necessary information about proposed permit changes
- made permit files accessible on MCAQ's website, and
- offered informational and educational opportunities to community members.

MCAQ will continue to investigate complaints in a timely manner and ensure CP&F continues to meet all their air quality permit requirements.

Response to Comments Regarding Mecklenburg County Air Pollution Control Ordinance (MCAPCO) Regulation 1.5109 – "Nuisance":

Two (2) of the comment documents stated that the foundry represents a nuisance to the community at large and cited MCAPCO Regulation 1.5109.

MCAPCO Regulation 1.5109 states that no person shall emit “quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.” CP&F’s compliance with health and technology based federal and state emission standards has previously been discussed. Enforcement tools for odor and dust, which make up other nuisance elements mentioned by the commenter, are addressed through regulations such as: MCAPCO Regulations 1.5110 – “Control and Prohibition of Odorous Emissions”, 1.5113 – Determination of Maximum Feasible Controls for Odorous Emissions,” and 2.0540 – “Particulates from Fugitive Dust Emission Sources.” For odor, MCAQ has incorporated maximum feasible control requirements into the permit. For dust and particulate matter emissions, MCAQ has not observed dust leaving the facility property or visible emissions in excess of an applicable standard. Residents may call (704) 336-5430 to report any observations of excessive dust leaving the facility property.

Response to Comments Related to Emissions Controls

Two (2) of the comment documents expressed concerns about emission controls for the new E-Coat #2 line.

CP&F reviewed options to reduce emissions from the proposed E-coat process and elected to install an electro-coat plant with a patent-pending emission-reduction energy recovery unit. The energy recovery unit is a control component for the E-coat process that is not required by regulation. In order to be conservative, the emissions estimate in the application does not assume an emission reduction from control, resulting in an increase of 10.7 tons of volatile organic compounds. In actual use, this optional control technology, at an added cost of \$150,000, is expected to reduce VOC emissions from the E-coat process by at least fifty percent according to the equipment manufacturer.

Response to Comment Related to Public Comment Period

One (1) comment document stated that the public is unable to contribute to public input on this modification due to the short timeline and impacts of the Covid-19 pandemic.

The following actions were taken to address the effects of COVID-19 Impacts:

- The invitation for the opportunity to comment was published in the Charlotte Observer in addition to being announced at the AQC meeting and posted on the MCAQ website.
- Each participant in the previous public hearing process was notified of the current opportunity to comment.

- In consultation with the Air Quality Commission (a volunteer, citizen advisory board for the Mecklenburg Board of County Commissioners), MCAQ extended the public comment period by 15 days in response to a written request.
- In addition to the routine methods of responding of mail and email, MCAQ also set up a dedicated voicemail line so that residents could leave voice comments by phone.

MCAQ believes that these additional steps are responsive to the current conditions and limitations.

Response to Comments Related to Odor

Two (2) of the comment documents expressed concerns about odor, the foundry's history of odor complaints, and whether the new E-coat #2 line will result in an increase in odor from the foundry.

No known odor complaint has been documented to be emanating from the current e-coat process. The volumetric flow rate from the proposed e-coat stack will be insignificant compared to other processes at the facility. This e-coat process stack will exhaust <0.5% of the total plant stack exhaust volume. For these reasons, as well as the use of the energy recovery unit to reduce VOC emissions, the e-coat process is expected to have minimal influence on odorous emissions.

A permit requirement specific to the Charlotte Pipe facility is to consider the potential for odor impacts and implement odor management techniques where practicable when planning for new construction or modification of emission sources. Charlotte Pipe has met this requirement with work practices standards in the E-coat area and by further electing to install the optional energy recovery unit to reduce emissions. When nuisance or objectionable odors occur at a regulated industrial source of air pollution, MCAQ notifies the facility of the violation. If the odor persists, MCAQ may require the facility to implement Maximum Feasible Controls under the authority granted in MCAPCO Regulation 1.5110 – “Control and Prohibition of Odorous Emissions” and according to the procedures prescribed in MCAPCO Regulation 1.5113 – “Determination of Maximum Feasible Controls for Odorous Emissions.”

MCAQ has required the facility to submit a Maximum Feasible Control Technology Analysis (MFCTA) and required implementation of the most stringent odor controls allowed under the local ordinance. The MFCTA included a review of all available odor control technologies for the industry type. These odor control technologies were ranked by control effectiveness with considerations for economic and technical feasibility as prescribed in the rule. MCAQ incorporated required controls from the MFCTA into the facility's Permit. CP&F's permit also requires ongoing monitoring, recordkeeping, and testing, and evaluation of less odorous raw materials. Additionally, the facility must assess odor management techniques when planning any new construction or modification of emission sources.

With this application, CP&F included an evaluation of odor for the new E-Coat #2 process. The odor mitigation techniques identified for E-Coat #2 are identical to those determined for the existing e-coat process in the MFCTA which include storing all VOC-containing materials in tightly-sealed containers and/or storage tanks and cleaning up spills expeditiously.

MCAQ conducts unannounced odor control system inspections on a regular basis. Recent inspections have shown compliance with all conditions and limitations in the permit. The facility is required to submit an Odor Control Systems Status Report (OCSSR) any time an odor complaint is received. All OCSSRs are then reviewed for compliance. CP&F is operating in compliance with the Maximum Feasible Odor Control requirements for the facility. This does not mean that there are no odors from the facility. It means that they are meeting regulatory requirements for minimization of odors.

Response to Comment Regarding Changing Land Use and Affected Population

One (1) comment document cited MCAPCO Regulation 1.5232 as grounds for revoking or modifying the air permit.

The comment references MCAPCO Regulation 1.5232 – “Issuance, Revocation, and Enforcement of Permits”. This particular regulation is not applicable to facilities that are classified as Title V and therefore does not apply to this permit action. However, Title V facilities are subject to a similar rule, MCAPCO Regulation 1.5519 – “Termination, Modification, Revocation of Permits”, which lists several reasons for which a permit may be modified or revoked. These reasons include: inaccurate application, conditions under which the permit was granted have changed, permit conditions have been violated, or if a facility refused to allow regulator access to property or records. Information provided in the construction permit application was found to be complete and accurate, permit conditions have not been violated, and MCAQ accesses the facility unannounced to review compliance with the permit and facility records. The facility is currently in compliance with all federal, state and local regulations.

The comment references revoking or modifying a permit if conditions under which the permit have changed such as changes in surrounding land use or affected population. Examples of changes in surrounding land use that would impact the issuance of a permit include land use assumptions used in emissions modeling or placement of modeling receptors. For example, either rural or urban topography must be specified in the computer model. If surrounding land use changed so significantly that the topography setting needed to be modified, MCAQ has the authority to require additional modeling under the aforementioned rules. If a facility could not demonstrate compliance, this could lead to revocation of the permit.

CP&F has submitted a compliant site-specific dispersion model using parameters consistent with the surrounding land use.

Thus, MCAQ has no regulatory authority to revoke or modify the permit based on the surrounding land use.

Response to Comment Related to Specific Chemicals Emitted by E-Coat #2

One (1) comment document requested information on the specific chemicals that will make up the VOC emissions associated with the E-Coat #2 line.

E-coat #2 is subject to the standards and requirements of MCAPCO Regulation 2.0967 – “Miscellaneous Metal and Plastic Parts Coatings,” which requires that VOC emissions (before control) for the surface coating of metal parts and products shall not exceed 3.5 lbs/gal of coating for an extreme performance coating.

The environmental data sheets were included with the application for the VOC paste and resin options proposed to be used for E-coat #2. The proposed resins show application rates ranging from 0.47 to 0.49 pounds of VOC per gallon coating. The proposed pastes show application rates ranging from 1.15 to 2.65 pounds of VOC per gallon coating. All of these values are less than the 3.5 lbs/gal requirement.

VOC process emissions from E-Coat #2 include the following chemicals as specified in the environmental data sheets in the permit application:

- 2-Butoxyethanol
- 1-Butanol
- Methyl Isobutyl Ketone
- Xylenes
- 1-Butoxy-2-Propanol
- Propylene Glycol Monomethyl Ether
- 1, 1'-Iminodipropan-2-ol

MCAQ affirms that the application was complete, and the facility has documented and demonstrated operational protocols that are in compliance with all applicable federal, state, and local requirements.